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## PATENT ABSTRACTS OF JAPAN

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<p>(30) Priority:</p> <p>(43) Date of application publication: <b>06.01.95</b></p> <p>(84) Designated contracting states:</p>	<p>(71) Applicant: <b>TOSHIBA CORP</b></p> <p>(72) Inventor: <b>ITO KIYOSHI</b></p> <p>(74) Representative:</p>
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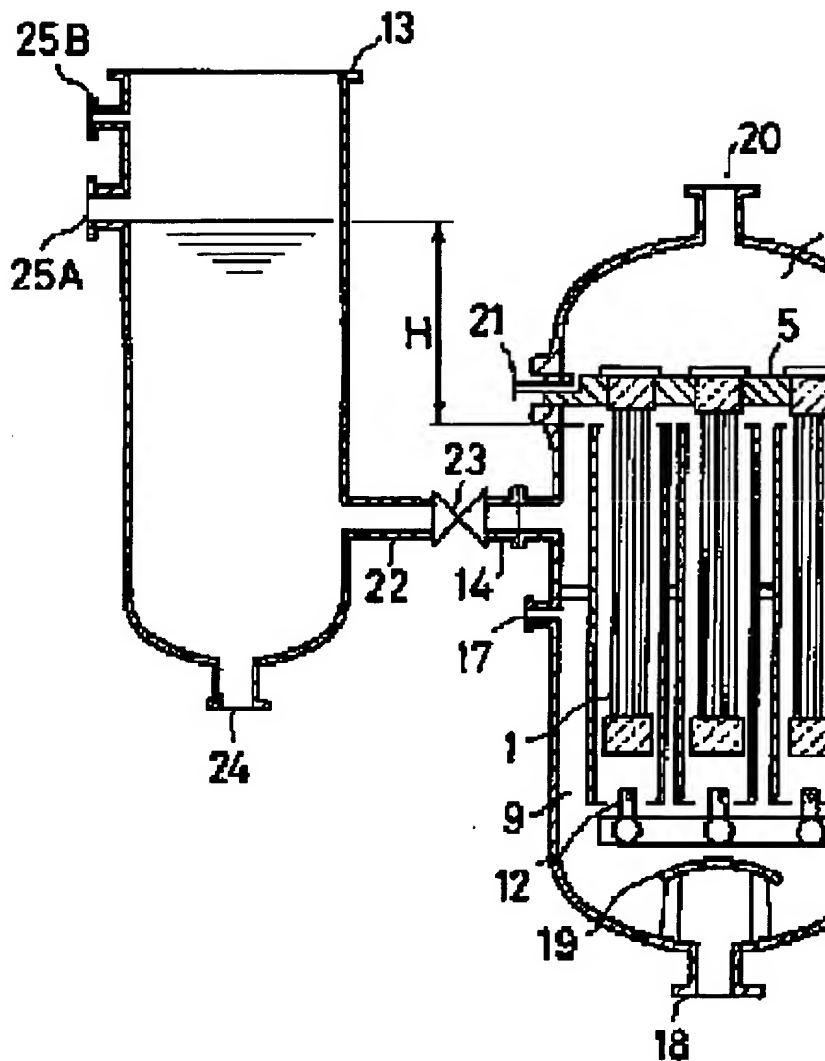
**(54) HOLLOW-FIBER  
MEMBRANE FILTER AND  
ITS CLEANING METHOD**

(57) Abstract:

**PURPOSE:** To obtain a hollow-fiber membrane filter with the differential pressure recovery rate enhanced and the service life prolonged and capable of filtering even a difficult-to-filtrate water.

**CONSTITUTION:** A filter 11 is divided by a tube plate 5 into a treated water section 6 and a filtration water section 7. A hollow-fiber membrane module 1 formed by bundling many hollow-fiber membranes is suspended from the tube plate 5. The treated water section 6 is divided by a partition plate 10 into an upper section 8 and a lower section 9. A cylinder 3 for protecting the module 1 is fixed to the partition plate 10. A bubble injection nozzle 12 is provided below the cylinder 3. A head tank 13 communicating with the upper section 8 and having a head difference  $H$  from the upper end of the cylinder 3 to about  $1/2$  of the length of the membrane 1 is furnished.

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